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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,108	02/01/2006	Takuji Kakigami	868-008	4940

25191 7590 02/13/2007

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EXAMINER	
YOUNG, SHAWQUIA	
ART UNIT	**PAPER NUMBER**
1626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	02/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,108	KAKIGAMI ET AL.	
	Examiner	Art Unit	
	Shawquia Young	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 2-12 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 2-12 are currently pending in this application. Claim 1 was cancelled in a preliminary amendment.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

Lack of Unity Requirement

Claims 2-12 are drawn to more than one inventive concept (as defined by PCT Rule 13), and accordingly, a restriction is required according to the provision of PCT Rule 13.2.

PCT Rule 13.2 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (requirement of unity of invention).

PCT Rule 13.2 states unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Annex B, Part 1 (b), provides that "special technical features" mean those technical features, which, as a whole, define a contribution over the prior art.

Annex B, Part 1 (e), provides combinations of different categories of claims and states:

"The method for determining unity of invention under Rule 13 shall be construed as permitting, in particular, the inclusion of any one of the following combinations of claims of
different categories in the same international application:

(i) in addition to an independent claim for a given product, an independent claims

for a process specially adapted for the manufacture of the said product, and an independent claim for use of the said product, or

(ii) in addition to an independent claim for a given process, an independent claim for an apparatus or means specially designed for carrying out the said process, or

(iii) in addition to an independent claim for a given product, and independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for an apparatus or means specially designed for carrying out the said process,..."

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Due to the numerous variables in the claims, e.g. $\mathbf{R^1}$, $\mathbf{R^2}$, $\mathbf{R^3}$, $\mathbf{R^4}$, **A**, **D**, **E**, **n**, etc. and their widely divergent meanings, a precise listing of inventive groups cannot be made. ***The following groups are exemplary***:

Group I claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 1; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing nitrogen in the 5-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 548.

Group II 2-4 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$

and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 2; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing nitrogen in the 5-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 548.

Group III claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 3; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing nitrogen in the 5-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 546.

Group IV claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to

which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 1; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing one nitrogen in the 6-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 546.

Group V claim(s) 2,3 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 2; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing one nitrogen in the 6-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 546.

Group VI claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen

atom or a cyano group; **D** represents –CONR^6, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents –$(CH_2)_m$- where **m** is an integer of 3; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing one nitrogen in the 6-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 546.

Group VII claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents –CONR^6, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents –$(CH_2)_m$- where **m** is an integer of 1; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing more than one heteroatom in the 6-membered ring of the bicyclic heterocylic group where at least one is nitrogen, classified in various subclasses in class 544.

Group VIII claim(s) 2-12 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents –CONR^6, -CO- or NR^6COR^6, R^6 represents a hydrogen atom

or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 2; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing more than one heteroatom in the 6-membered ring of the bicyclic heterocylic group where at least one is nitrogen, classified in various subclasses in class 544.

Group IX claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-(CH_2)_m-$ where **m** is an integer of 3; **n** is an integer of 0 to 3; and **A** represents a 6-5-system bicyclic heterocyclic group containing more than one heteroatom in the 6-membered ring of the bicyclic heterocylic group where at least one is nitrogen, classified in various subclasses in class 544.

Group X claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: R^1 and R^2 are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or R^1 and R^2, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; R^3 represents a hydrogen atom or an optionally substituted C6-10 aryl group; R^4 represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, R^6 represents a

hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-CH_2OCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with at least one nitrogen in the 5-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 544.

Group XI claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-CH_2OCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with at least one nitrogen in the 6-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 544.

Group XII claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-CH_2OCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with more than one

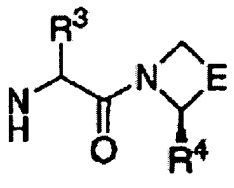
heteroatom in the 6-membered ring of the bicyclic heterocylic group where at least one is nitrogen, classified in various subclasses in class 544.

Group XIII claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-SCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with at least one nitrogen in the 5-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 548.

Group XIV claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-SCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with one nitrogen in the 6-membered ring of the bicyclic heterocylic group, classified in various subclasses in class 546.

Group XV claim(s) 2 and 7-10 (in part), are drawn to products of formula (I) wherein: $\mathbf{R^1}$ and $\mathbf{R^2}$ are the same or different and each represents a hydrogen atom, an optionally substituted C1-6 alkyl group, or $\mathbf{R^1}$ and $\mathbf{R^2}$, together with a carbon atom to which they are bound represent a 3- to 6-membered cycloalkyl group; $\mathbf{R^3}$ represents a hydrogen atom or an optionally substituted C6-10 aryl group; $\mathbf{R^4}$ represents a hydrogen atom or a cyano group; **D** represents $-CONR^6$, -CO- or NR^6COR^6, $\mathbf{R^6}$ represents a hydrogen atom or an optionally substituted C1-6 alkyl group, **E** represents $-SCH_2-$; and **A** represents a 6-5-system bicyclic heterocyclic group with more than one heteroatom in the 6-membered ring of the bicyclic heterocylic group where at least one is a nitrogen, classified in various subclasses in class 544.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted. Again, **this list is not exhausted**, as it would be impossible under the time constraints due to the sheer volume of subject matter instantly claimed. Therefore, applicant may choose to elect a single invention by identifying another specific embodiment not listed in the exemplary groups of the invention and examiner will endeavor to group the same. **If applicant is unable to elect a single invention, applicant may instead choose to elect a specific compound and examiner will attempt to group it.** The claims herein lack unity of invention under PCT Rule 13.1 and 13.2 since the compounds defined in the claims lack a significant structural element qualifying as the special technical feature that defines a contribution over the prior art (*See*, US Patent No. 5,416,093, for example). The compounds claimed contain the special technical

feature  without the variables, which does not define a contribution over the prior art. The compounds vary in classification and when taken as a whole result in vastly different compounds. Accordingly, the vastness of the claimed subject matter and the complications in understanding the claimed subject matter imposes a burden on any examination of the claimed subject matter.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 8:00 AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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